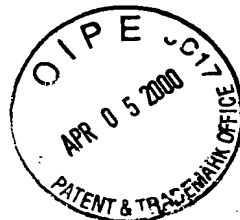


SEQUENCE LISTING

<110> Yano, Tetsuya; Nomoto, Tsuyoshi; Imamura, Takeshi; Canon Kabushiki Kaisha
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Compounds and Aromatic Compounds, and Method for Environmental Remediation
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Asp Ile Lys Pro Leu Arg His Thr Phe Ala His Val Ala Gln Asn Ile

Gly Gly Asp Lys Thr Ala Thr Arg Tyr Gln Glu Gly Met Met Gly Ala

Gln Pro Gln Glu Asn Phe His Tyr Arg Pro Thr Trp Asp Pro Asp Tyr

Glu Ile Phe Asp Pro Ser Arg Ser Ala Ile Arg Met Ala Asn Trp Tyr

Ala Leu Lys Asp Pro Arg Gln Phe Tyr Tyr Ala Ser Trp Ala Thr Thr

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270 275 **275** 280 **280** 285
Asp Ala Val Val Lys Thr Met Ala Ala Glu Ser Asp Asp Asn Arg Ala
285 290 **290** 295 **295** 300 **300** 305
Leu Leu Ala Arg Trp Thr Arg Asp Trp Ser Ala Arg Ala Glu Ala Ala
305 **295** 310 **300** 315 **295** 320
Leu Ala Pro Val Ala Ala Arg Ala Leu Gln Asp Ala Gly Arg Ala Ala
300 325 **305** 330 **310** 335
Leu Asp Glu Val Arg Glu Gln Phe His Ala Arg Ala Ala Arg Leu Gly
315 340 **320** 345 **325** 350
Ile Ala Leu
330 355

<210> 4

<211> 89

<212> PRT

<213> Burkholderia cepacia

<220>

<223> TomM polypeptide

<400> 4

Met Ser Asn Val Phe Ile Ala Phe Gln Ala Asn Glu Asp Ser Arg Pro

5 10 15

Ile Val Asp Ala Ile Val Ala Asp Asn Pro Arg Ala Val Val Val Glu

20 25 30

Ser Pro Gly Met Val Lys Ile Asp Ala Pro Asp Arg Leu Thr Ile Arg

35 40 45

Arg Glu Thr Ile Glu Glu Leu Thr Gly Thr Arg Phe Asp Leu Gln Gln

50 55 60

Leu Gln Val Asn Leu Ile Thr Leu Ser Gly His Ile Asp Glu Asp Asp

65 70 75 80

Asp Glu Phe Thr Leu Ser Trp Ser His

85

<210> 5

<211> 516

<212> PRT

<213> Burkholeria cepacia

<223> TomN polypeptide

<400> 5

Met Asp Thr Pro Thr Leu Lys Lys Lys Leu Gly Leu Lys Asp Arg Tyr

5 10 15

Ala Ala Met Thr Arg Gly Leu Gly Trp Glu Thr Thr Tyr Gln Pro Met

20 25 30

Asp Lys Val Phe Pro Tyr Asp Arg Tyr Glu Gly Ile Lys Ile His Asp

35 40 45

Trp Asp Lys Trp Val Asp Pro Phe Arg Leu Thr Met Asp Ala Tyr Trp

50 55 60

Lys Tyr Gln Gly Glu Lys Glu Lys Lys Leu Tyr Ala Val Ile Asp Ala

65 70 75 80

Phe Thr Gln Asn Asn Ala Phe Leu Gly Val Ser Asp Ala Arg Tyr Ile

85 90 95

Asn Ala Leu Lys Leu Phe Leu Gln Gly Val Thr Pro Leu Glu Tyr Leu

100 105 110

Ala His Arg Gly Phe Ala His Val Gly Arg His Phe Thr Gly Glu Gly

115 120 125

Ala Arg Ile Ala Cys Gln Met Gln Ser Ile Asp Glu Leu Arg His Tyr

130	135	140
Gln Thr Glu Thr His Ala Met Ser Thr Tyr Asn Lys Phe Phe Asn Gly		
145	150	155
		160
Phe His His Ser Asn Gln Trp Phe Asp Arg Val Trp Tyr Leu Ser Val		
165	170	175
Pro Lys Ser Phe Phe Glu Asp Ala Tyr Ser Ser Gly Pro Phe Glu Phe		
180	185	190
Leu Thr Ala Val Ser Phe Ser Phe Glu Tyr Val Leu Thr Asn Leu Leu		
195	200	205
Phe Val Pro Phe Met Ser Gly Ala Ala Tyr Asn Gly Asp Met Ser Thr		
210	215	220
Val Thr Phe Gly Phe Ser Ala Gln Ser Asp Glu Ser Arg His Met Thr		
225	230	235
		240
Leu Gly Ile Glu Cys Ile Lys Phe Leu Leu Glu Gln Asp Pro Asp Asn		
245	250	255
Val Pro Ile Val Gln Arg Trp Ile Asp Lys Trp Phe Trp Arg Gly Tyr		
260	265	270
Arg Leu Leu Thr Leu Val Ala Met Met Met Asp Tyr Met Gln Pro Lys		
275	280	285
Arg Val Met Ser Trp Arg Glu Ser Trp Glu Met Tyr Ala Glu Gln Asn		
290	295	300
Gly Gly Ala Leu Phe Lys Asp Leu Ala Arg Tyr Gly Ile Arg Glu Pro		
305	310	315
		320
Lys Gly Trp Gln Asp Ala Cys Glu Gly Lys Asp His Ile Ser His Gln		
325	330	335
Ala Trp Ser Thr Phe Tyr Gly Phe Asn Ala Ala Ser Ala Phe His Thr		
340	345	350
Trp Val Pro Thr Glu Asp Glu Met Gly Trp Leu Ser Ala Lys Tyr Pro		
355	360	365
Asp Ser Phe Asp Arg Tyr Tyr Arg Pro Arg Phe Asp His Trp Gly Glu		
370	375	380
Gln Ala Arg Ala Gly Asn Arg Phe Tyr Met Lys Thr Leu Pro Met Leu		
385	390	395
		400
Cys Gln Thr Cys Gln Ile Pro Met Leu Phe Thr Glu Pro Gly Asn Pro		
405	410	415
Thr Lys Ile Gly Ala Arg Glu Ser Asn Tyr Leu Gly Asn Lys Phe His		
420	425	430

Phe Cys Ser Asp His Cys Lys Asp Ile Phe Asp His Glu Pro Gln Lys
 435 440 445
 Tyr Val Gln Ala Trp Leu Pro Val His Gln Ile His Gln Gly Asn Cys
 450 455 460
 Phe Pro Pro Asp Ala Asp Pro Gly Ala Glu Gly Phe Asp Pro Leu Ala
 465 470 475 480
 Ala Val Leu Asp Tyr Tyr Ala Val Thr Met Gly Arg Asp Asn Leu Asp
 485 490 495
 Phe Asp Gly Ser Glu Asp Gln Lys Asn Phe Ala Ala Trp Arg Gly Gln
 500 505 510

Ala Thr Arg Asn
 515

<210> 6

<211> 118

<212> PRT

<213> Burkholderia cepacia

<220>

<223> TomO polypeptide

<400> 6

Met Ala Val Ile Ala Leu Lys Pro Tyr Asp Phe Pro Val Lys Asp Ala
 5 10 15
 Val Glu Lys Phe Pro Ala Pro Leu Leu Tyr Val Cys Trp Glu Asn His
 20 25 30
 Leu Met Phe Pro Ala Pro Phe Cys Leu Pro Leu Pro Pro Asp Met Pro
 35 40 45
 Phe Gly Ala Leu Ala Gly Asp Val Leu Pro Pro Val Tyr Gly Tyr His
 50 55 60
 Pro Asp Phe Ala Lys Ile Asp Trp Asp Arg Val Glu Trp Phe Arg Ser
 65 70 75 80
 Gly Glu Pro Trp Ala Pro Asp Pro Ala Lys Ser Leu Ala Gly Asn Gly
 85 90 95
 Leu Gly His Lys Asp Leu Ile Ser Phe Arg Thr Pro Gly Leu Asp Gly
 100 105 110
 Leu Gly Gly Ala Ser Phe

115

<210> 7

<211> 354
 357

<212> PRT

<213> Burkholderia cepacia

<220>

<223> TomP polypeptide

<400> 7

Met Ser His Gln Leu Thr Ile Glu Pro Leu Gly Val Thr Ile Glu Val
5 10 15
Glu Glu Gly Gln Thr Met Leu Asp Ala Ala Leu Arg Gln Gly Ile Tyr
20 25 30
Ile Pro His Ala Cys Cys His Gly Leu Cys Gly Thr Cys Lys Val Ala
35 40 45
Val Leu Asp Gly Glu Thr Asp Pro Gly Asp Ala Asn Pro Phe Ala Leu
50 55 60
Met Asp Phe Glu Arg Glu Glu Gly Lys Ala Leu Ala Cys Cys Ala Thr
65 70 75 80
Leu Gln Ala Asp Thr Val Ile Glu Ala Asp Val Asp Glu Glu Pro Asp
85 90 95
Ala Glu Ile Ile Pro Val Arg Asp Phe Ala Ala Asp Val Thr Arg Ile
100 105 110
Glu Gln Leu Thr Pro Thr Ile Lys Ser Ile Arg Leu Lys Leu Ser Gln
115 120 125
Pro Ile Arg Phe Gln Ala Gly Gln Tyr Val Gln Leu Glu Ile Pro Gly
130 135 140
Leu Gly Gln Ser Arg Ala Phe Ser Ile Ala Asn Ala Pro Ala Asp Val
145 150 155 160
Ala Ala Thr Gly Glu Ile Glu Leu Asn Val Arg Gln Val Pro Gly Gly
165 170 175
Leu Gly Thr Gly Tyr Leu His Glu Gln Leu Ala Thr Gly Glu Arg Val
180 185 190
Arg Leu Ser Gly Pro Tyr Gly Arg Phe Phe Val Arg Arg Ser Ala Ala
195 200 205
Arg Pro Met Ile Phe Met Ala Gly Gly Ser Gly Leu Ser Ser Pro Arg
210 215 220
Ser Met Ile Ala Asp Leu Leu Ala Ser Gly Val Thr Ala Pro Ile Thr
225 230 235 240
Leu Val Tyr Gly Gln Arg Ser Ala Gln Glu Leu Tyr Tyr His Asp Glu
245 250 255

Phe Arg Ala Leu Ala Glu Arg His Pro Asn Phe Thr Tyr Val Pro Ala
 260 265 270
 Leu Ser Glu Gly Ala Pro His Ala Gly Gly Asp Val Ala Gln Gly Phe
 275 280 285
 Val His Asp Val Ala Lys Ala His Phe Gly Gly Asp Phe Ser Gly His
 290 295 300
 Gln Ala Tyr Leu Cys Gly Pro Pro Ala Met Ile Asp Ala Cys Ile Thr
 305 310 315 320
 Thr Leu Met Gln Gly Arg Leu Phe Glu Arg Asp Ile Tyr His Glu Lys
 325 330 335
 Phe Ile Ser Ala Ala Asp Ala Gln Gln Thr Arg Ser Pro Leu Phe Arg
 340 345 350

Arg Val

<210> 8

<211> 118

<212> PRT

<213> Burkholderia cepacia

<220>

<223> TomQ polypeptide

<400> 8

Met Asp Ala Gly Arg Val Cys Gly Thr Val Thr Ile Ala Gln Thr Asp
 5 10 15
 Glu Arg Tyr Ala Cys Val Ser Gly Glu Ser Leu Leu Ala Gly Met Ala
 20 25 30
 Lys Leu Gly Arg Arg Gly Ile Pro Val Gly Cys Leu Asn Gly Gly Cys
 35 40 45
 Gly Val Cys Lys Val Arg Val Leu Arg Gly Ala Val Arg Lys Leu Gly
 50 55 60
 Pro Ile Ser Arg Ala His Val Ser Ala Glu Glu Glu Asn Asp Gly Tyr
 65 70 75 80
 Ala Leu Ala Cys Arg Val Val Pro Asp Gly Asp Val Glu Leu Glu Val
 85 90 95
 Ala Gly Arg Leu Arg Lys Pro Phe Phe Cys Gly Met Ala Cys Ala Gly
 100 105 110
 Thr Ala Ala Ile Asn Lys
 115

<210> 9

<211> 36

<212> DNA
<213> Artificial Sequence
<223> Designed PCR primer
<400> 9
agtcgccat ggaggcgaca ccgatcatga atcagc 36
<210> 10
<211> 34
<212> DNA
<213> Artificial Sequence
<220>
<223> Designed PCR Primer
<400> 10
cacccgacat ggatcagcac cccaccgac tttc 34
<210> 11
<211> 34
<212> DNA
<213> Artificial Sequence
<223> Designed PCR primer
<400> 11
tgccgccttc catgggttct gccgcgaaca gcag 34
<210> 12
<211> 39
<212> DNA
<220>
<213> Artificial Sequence
<223> Designed PCR primer
<400> 12
agcaagccat ggccatcgag ctgaagacag tcgacatca 39
<210> 13
<211> 35
<212> DNA
<213> Artificial Sequence
<220>
<223> Designed PCR primer
<400> 13
ccgaccatca cctgctcggc cagatggaag tcgag 35